

Title (en)
IGNITION PLUG

Title (de)
ZÜNDKERZE

Title (fr)
BOUGIE D'ALLUMAGE

Publication
EP 2933888 A4 20160831 (EN)

Application
EP 13865193 A 20131002

Priority
• JP 2012274217 A 20121217
• JP 2013076769 W 20131002

Abstract (en)
[origin: EP2933888A1] A spark plug 1 that suppresses a breakage of an insulator due to the thermal shock while ensuring the prevention of a spark penetration in the insulator has a metal shell 3 and a cylindrical ceramic insulator 2 disposed in an inner circumference of the metal shell 3, having an axial hole 4 extending in an axial line CL direction, and having a tip located in more tip side than a tip of the metal shell 3, and a distance along the axial line CL1 from the tip of the metal shell 3 to the tip of the ceramic insulator 2 is 0.5 mm or more. It satisfies $C \geq 1.07 \text{ mm}$ and $V \geq 3.9 \text{ mm}^3$, where C is a thickness of the ceramic insulator in a cross section passing an inner circumference surface tip 3A of the metal shell 3 and orthogonal to the axial line CL1 and V is a volume of the ceramic insulator 2 within a range of 0.5 mm from the tip of the ceramic insulator 2 to a rear end side in the axial line CL1 direction.

IPC 8 full level
H01T 13/20 (2006.01); **H01T 13/08** (2006.01); **H01T 13/16** (2006.01); **H01T 13/34** (2006.01)

CPC (source: EP US)
H01T 13/08 (2013.01 - EP US); **H01T 13/20** (2013.01 - EP US); **H01T 13/34** (2013.01 - EP US); **H01T 13/16** (2013.01 - EP US)

Citation (search report)
• [I] DE 10340043 A1 20050324 - BOSCH GMBH ROBERT [DE]
• [A] WO 2009039478 A2 20090326 - HONEYWELL INT INC [US], et al
• [A] JP S63202874 A 19880822 - NIPPON DENSO CO
• See references of WO 2014097708A1

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)
EP 2933888 A1 20151021; **EP 2933888 A4 20160831**; **EP 2933888 B1 20200219**; CN 104782006 A 20150715; CN 104782006 B 20170517; JP 2014120309 A 20140630; JP 5690323 B2 20150325; KR 101822723 B1 20180126; KR 20150095852 A 20150821; US 2015333487 A1 20151119; US 9240676 B2 20160119; WO 2014097708 A1 20140626

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